



Envisioning Excellence: Lessons from Effective School Indoor Air Quality (IAQ) Programs

A Snapshot of Seven Profiles in Excellence



Read more about the profiles in IAQ Excellence and the Framework for Effective School IAQ Programs at www.epa.gov/iaq/schools/excellence.html

Visit www.epa.gov/iaq/schools/excellence.html to access an in-depth treatment of the profiles in IAQ Excellence –

Envisioning Excellence: Lessons from Effective School IAQ Programs

Seven Profiles in IAQ Excellence

EPA has developed *Envisioning Excellence: Lessons from Effective School IAQ Programs* to help schools take effective action to advance health, safety, and wellness initiatives. *Envisioning Excellence* presents the Framework for Effective School IAQ Programs—guidelines that detail the organizational approaches and practices that are fundamental to school IAQ program success—and tells the stories of several very different school districts that applied the Framework to create effective and enduring IAQ programs. In their diversity, these stories demonstrate the flexibility and adaptability of the Framework. They make clear that any school, regardless of location, size, budget, or facility conditions, can use the Framework to launch and sustain a successful IAQ program.

Following is a snapshot of seven school districts and the work they have done to effectively manage IAQ. These Profiles in IAQ Excellence demonstrate the Framework for Effective School IAQ Programs in action showing how the six Key Drivers that comprise the Framework contribute to each school district's program success.

The Framework for Effective School IAQ Programs: Six Key Drivers



Learn how:

Blue Valley School District	Suburban District in Overland Park, KS <ul style="list-style-type: none">• 35 facilities ranging from 0-87 years old• 21,000 students & 2,650 staff	Built momentum and secured support for facility investments by linking IAQ management to student performance 2
West Carrollton School District	Suburban District near Dayton, OH <ul style="list-style-type: none">• 7 facilities ranging from 40-90 years old• 3,800 students & 485 staff	Overcame an IAQ crisis and loss of public trust by employing an open communications and planning strategy to build understanding, improve assessments, and create ownership for IAQ results 3
Hartford Public Schools	Urban District in Connecticut (sixth highest poverty rate of any large U.S. city) <ul style="list-style-type: none">• 48 facilities ranging from 0-127 years old• 24,500 students & 4,300 staff	Used the <i>IAQ TFS</i> Program to coordinate school health and facilities functions across the district and engage community organizations in an effort to improve student asthma 4
Katy Independent School District	Rapidly growing suburban District outside of Houston, TX <ul style="list-style-type: none">• 59 facilities ranging from 0-40 years old• 53,588 students & 6,513 staff	Turned an IAQ crisis into an opportunity by creating an effective IAQ program led by key senior managers at the district-level and by health services representatives at each school 5
The School Board of Broward County, Florida	Urban District in the Fort Lauderdale, FL area <ul style="list-style-type: none">• 253 facilities ranging from 0-80 years old• 258,905 students & 38,833 staff	Created a collaborative approach to IAQ management that brought parents, unions, teachers, facilities, maintenance, and operations together 6
Saugus Union School District	Suburban District in Santa Clarita Valley in Northern Los Angeles County, CA <ul style="list-style-type: none">• 17 facilities ranging from 2-44 years old• 11,000 students & 2,000 staff	Built trust after an IAQ crisis by integrating IAQ into standard operations and policy and bringing the public into the process 7
Visalia Unified School District	Rural District in Visalia, CA (Agricultural community with one of the highest childhood asthma rates in the U.S.) <ul style="list-style-type: none">• 37 facilities ranging from 1-60 years old• 26,000 students & 2,400 staff	Incorporated IAQ best practices into every aspect of operation through <i>IAQ TFS</i> training and adoption of district-wide IAQ policies 8

BLUE VALLEY SCHOOL DISTRICT

Building Momentum – Linking IAQ Management to Student Success

PROGRAM RESULTS

In 2000, Blue Valley School District (BVSD) launched an IAQ management program to address increased parent interest in environmental issues, counter the risks of a public relations disaster like the one that occurred when a neighboring district closed a school for IAQ problems, and ensure outstanding learning environments for their students. BVSD applied the *IAQ TJS* model to create a structure for facilities management that tied their existing programs together and leveraged resources to radically accelerate their progress. *“Our program’s success didn’t materialize overnight. It started with a vision and expectation of excellence and we have continued to push the program forward at every opportunity.” – Dave Hill, Executive Director, Facilities and Operations*

Organize for Success – Build an Effective Team: BVSD created an inter-disciplinary IAQ team that includes design and construction, safety, energy, operations and maintenance, and custodial functions. A designated IAQ coordinator leads the team and everyone in the district knows he is the ‘go-to guy’ for IAQ. The team also includes an executive-level leader who relays the team’s goals and investment needs to the district’s strategic planning committee. *“Before adopting IAQ TJS, we had a lot of successful, but...unrelated pieces in place for managing our environments...IAQ TJS gave us a framework for organizing; it provided the comprehensive approach we needed...to pull it all together, strengthen our existing practices...and get more out of our work.” – Dave Hill*

Assess Your Environments Continuously – Use Technology to Make it Easier: Blue Valley uses technology to benchmark facilities, conduct routine monitoring, and save money and man hours by avoiding problems. *“With regular inspections, we can detect potential problems before [they] become larger issues that require expensive repairs. By demonstrating the cost savings that preventive maintenance can deliver, we convinced the decision-makers that upfront technology investments made sense.” – Dave Hill*

ACT to ADDRESS STRUCTURAL, INSTITUTIONAL, and BEHAVIORAL ISSUES: *Education Changes Culture & Behavior*

“We have been able to sustain the excellence of our district’s IAQ management program because we have cultivated an atmosphere of program ownership and building stewardship among all of the employees who are responsible for maintaining excellent IAQ.”

– Dave Hill, Executive Director,
Facilities and Operations

Plan Your Short and Long-Term Activities – Put It in Writing:

Blue Valley institutionalized their program by including IAQ goals in the district’s strategic plan and establishing metrics to evaluate their progress against goals.

Communicate with Everyone, All the Time – Share Your Goals:

“Everyone soon knew exactly how their role... contributes to outstanding learning environments for the kids.” By tying the IAQ work to a goal that people care deeply about, BVSD was able to build the depth of commitment the IAQ initiative needed right from the start.

Act to Address Structural, Institutional, and Behavioral Issues

– ***Education Changes Culture & Behavior:*** Blue Valley used training to cultivate a culture of stewardship and to create IAQ champions across the organization. All facilities staff members were trained to identify root causes of IAQ problems and to avoid cosmetic fixes.

Evaluate Your Results for Continuous Improvement – Survey Your Customers: BVSD asks occupants to score the school’s indoor environment on annual surveys and aims to receive scores of at least 4 out of 5 from 100% of respondents.

WEST CARROLLTON SCHOOL DISTRICT

Communicating to Build Trust, Conduct Effective Assessments, and Deliver IAQ Results

PROGRAM RESULTS

West Carrollton School District (WCSD) began thinking seriously about IAQ issues in the wake of a public mold, moisture, and ventilation problem that resulted in a lawsuit and negative media attention in the fall of 2001. In response, WCSD launched an IAQ management program in December 2001 to improve facility conditions and regain the public trust. The district built a program using guidance from the *IAQ TFS* Kit. *“IAQ TFS gave us the guidance we needed to form our original committee and assess our facilities...an organizational framework and the credibility we needed in the wake of our crisis.”* – Dana Green, Director of Business Services

Organize for Success — Build an Effective Team: WCSD’s IAQ Team is a diverse group. Members include once skeptical parents, school board members, the superintendent, the director of business services, the operations supervisor for maintenance and facilities, the facilities manager, union representatives from the teachers and classified workers unions, and at least one representative from each building. This composition makes the team a communications network, a warehouse of facility expertise, and a decision-making body that can authorize spending and assign personnel.

Assess Your Environments Continuously — Prevention Today Means Savings Tomorrow: WCSD conducts preventative assessments by benchmarking all rooms in the District and conducting in-depth occupant surveys annually. They use this data to establish a picture of the normal functioning of every location in every facility. These tools allow them to recognize small problems early and act to prevent big problems from emerging.

WCSD tracks the number and type of IAQ concerns reported on their annual surveys.

- ▲ Found less severe IAQ problems that take less time to address from year to year
- ▲ Improved student performance, attendance, and increased levels of staff and community trust
- ▲ Increased voter support: converted a fixed-term to a continuing levy to provide guaranteed funds for ten years of capital improvements and operations
- ▲ *“IAQ TFS became the model for environmental health, safety, and wellness issues and helped us to recognize broader opportunities for professional and student development and wellness”*

– Dr. Rusty Clifford,
Superintendent

ASSESS YOUR ENVIRONMENTS CONTINUOUSLY:

Survey Occupants & Keep an Ear to the Ground

*“We would not have thought of doing walkthroughs the way we now do them – with thorough input from staff and reviewing each facility with a fine toothed comb – if we hadn’t learned to do so from the *IAQ TFS* Kit.”*

– Dana Green,
Director of Business Services

Plan Your Short and Long-Term Activities — Put It in Writing:

Including IAQ issues in their strategic plan ensures that WCSD remains committed to the program because IAQ is linked to the most important goal of all: “being the school district of choice in Ohio.” *“Our IAQ program will... always be in the plan...because we recognize that wellness is largely influenced by IAQ.”* – Dr. Rusty Clifford, Superintendent

Communicate with Everyone, All the Time — Be Transparent & Inclusive:

During their mold crisis, WCSD observed the value of honest and open communication: it was the best strategy for diffusing the media and demonstrating to the public and staff a “sincere commitment to protecting school health and safety.” *“The IAQ TFS program is bigger than just an individual or even a small group; the IAQ TFS approach for addressing problems has become a way of life for everyone in the school community, from administration to students.”* – Dana Green, Director of Business Services

Act to Address Structural, Institutional, and Behavioral Issues — Education Changes Culture & Behavior:

WCSD involves all staff in the assessment process to build their confidence in the IAQ program and to get better data on facility conditions. Staff participation in the in-depth surveys transforms them into educated IAQ champions and building stewards.

HARTFORD PUBLIC SCHOOLS

Using IAQ Management to Address Asthma in an Urban District

PROGRAM RESULTS

HPS monitors IAQ TfS implementation at the District's schools, and the nursing staff tracks asthma outcomes.

- ▲ Decrease in asthma visits to school health rooms every year since program began
- ▲ Sustainable and active health and safety teams in the majority of schools
- ▲ Greatly enhanced staff commitment, involvement, and stewardship of facility health
- ▲ Widespread staff awareness of how and why to report IAQ concerns
- ▲ IAQ TfS recommendations used in renovations and new buildings
- ▲ Proactive approach ensures IAQ problems are addressed in a systematic and timely manner

The city of Hartford has the sixth highest child poverty rate of any large city in the U.S. In 2001, a study of Medicaid eligible, school-aged children in Hartford revealed an asthma prevalence of 19%. The city council declared an asthma emergency and called on the school district to help manage asthma. Hartford Public Schools (HPS) was challenged by old buildings and limited resources. Two dedicated champions used the *IAQ TfS* Program to create a wellness program for the district. They recruited collaborators from across the community and established a network of Health and Safety Teams at all schools linked through the district-level nursing and building and grounds functions.

Organize for Success — Systems Matter: In 2001, HPS applied the *IAQ TfS* framework to create a district-wide wellness program and address rising rates of asthma. They didn't add IAQ activities to a to-do list; they used *IAQ TfS* to create a systemic solution. They recruited teams at each school site and partnered with health and environmental organizations from across the city (universities, non-profits, local and state government, etc.).

Assess Your Environments Continuously — Survey Occupants & Keep an Ear to the Ground: HPS trained the site-based Health and Safety Teams with the tools and information they needed to assess their facilities. The teams gather detailed information from their occupants about facility history, health trends, and comfort issues and use that information to develop a list of priority activities. By allowing school staff to assess their facilities and prioritize their own IAQ needs, the district empowers school-based teams to be facility experts and stewards.

ORGANIZE for SUCCESS: Systems Matter

"From our very first pilot project...we were driven by the question, 'what are we going to do about asthma?' The fact that *IAQ TfS* provides support for asthma management was a major selling point for us and our administrators."

— Pam Clark,
Hartford Public Schools

Plan Your Short and Long-Term Activities — Work in Stages: HPS put together the components of success over time. At first, there was a single pilot project. But, they used that example to build momentum and support; used the support to build a training program; used the training program to create school-based Health and Safety Teams; used the teams to assess the facilities; and so on. And now, they are ensuring sustainability by reinforcing the program with focused training for custodians and nurses and outreach to principals so that everyone understands the link between IAQ management, school wellness and student health.

Communicate with Everyone, All the Time — Make it Meaningful to Your Audience: The IAQ program champions in HPS marketed the program by describing their goals for it in the terms that were most relevant to each audience: for administrators it was a solution for asthma and attendance; for school-based teams, it was the key to achieving "safe, clean, and healthy" schools.

Act to Address Structural, Institutional, and Behavioral Issues — Training Can Change Institutions: No one person or group is overwhelmed by the workload because the responsibility for good IAQ in the schools is spread and shared across the district, the schools, and the community. "Prior to the implementation of our *IAQ* program, environmental concerns in school buildings would receive negative media attention. Now, we receive far fewer IAQ complaints and instead schools request *IAQ TfS* training." Paula Schenck, University of Connecticut Health Center

KATY INDEPENDENT SCHOOL DISTRICT

Turning Crisis into Opportunity...and Thriving

KISD launched their *IAQ TjS* Program to respond to a mold crisis that led to the closing of one of their schools and the sudden relocation of over 700 students in the spring of 2002. The community was angry and didn't trust the district to maintain healthy buildings for their children. The district learned some powerful lessons during their crisis and put them to work immediately: a comprehensive IAQ program is essential; it costs less to prevent IAQ problems than to fix them; IAQ management has to be integrated into the culture to be successful; continuous improvement, not just remediation, is the goal; and open and honest communication with the public is essential.

Organize for Success — Designate & Empower a Leader:

KISD's IAQ Program is led by an assistant director inside the Maintenance and Operations (M&O) Department. This level of authority lets the IAQ coordinator hire staff, set policies, and apply funds as required to meet the IAQ challenges.

Assess Your Environments Continuously — Establish

Your Baseline: The IAQ team recorded baseline environmental conditions at all facilities by conducting walkthrough assessments in the first year of the program. The baseline has provided a way to measure progress over time and continuously motivates staff to take effective actions. And ongoing assessments show continuously improved facility performance over time.

Plan Your Short and Long-Term Activities — Prioritize

Your Activities: KISD prioritizes IAQ activities in at least two ways: after the assessments, supervisors in the M&O Department review their action lists and rank priorities according to risk; and before any money is spent on major facility upgrades, the department prioritizes sealing of building envelopes, windows, and doors to prevent moisture intrusion and manage mold risks.

COMMUNICATE with EVERYONE, ALL THE TIME: Share Your Goals and Communicate Your Results

"The whole district; from students, to staff, to administrators, and even parents are well informed about IAQ and its effects on health. The Maintenance Department, New Building Department, and administrators take a proactive approach to maintaining our buildings...We still have to be aware that keeping a building in top shape costs a lot of money, but we know that it saves so much money in the long run."

— Pam Nielsen,
(self-described) Proud Katy ISD Parent

PROGRAM RESULTS

KISD tracks baseline facility conditions and improvements over time based on their walkthrough assessments and the number of reported IAQ concerns from work orders.

- ▲ Walkthrough assessments of all schools show continuous improvement from baseline
- ▲ Decrease in reported IAQ concerns
- ▲ Improved student, teacher, and staff comfort, performance, and satisfaction
- ▲ Decreased absenteeism and reduced number of nurse visits for asthma
- ▲ Turned once negative publicity into positive publicity for the district
- ▲ Ongoing public support for major facility investments, including facility upgrades
- ▲ 1 of 12 schools internationally to win Facilities Masters Award from the Association of School Business Officials International

Communicate with Everyone, All the Time — Be Transparent & Inclusive:

KISD began an aggressive and open communications campaign when the crisis hit and since then, has never stopped engaging their community. The IAQ team shared their IAQ plan, continuously updated the community on its progress, and willingly opens their facilities to community tours. This openness and the team's follow-through on their commitments built trust and significant support for the program in a once-doubting community.

Act to Address Structural, Institutional, and Behavioral Issues

— Education Changes Culture & Behavior: KISD saw a change in the principals' reactions from Year 1 to 2 of the assessment process. At first, principals hardly noticed their reports, but by Year 2, they paid close attention. The district-level staff's reaction to the reports demonstrated that "this IAQ stuff" must be important. When the assessments were quickly followed by M&O activity in their schools, the principals took notice.

THE SCHOOL BOARD OF BROWARD COUNTY, FL

The More Open and Collaborative the Program, the Better the IAQ Outcomes

The School Board of Broward County, Florida (Broward) experienced a mold crisis in 2002 that led to the implementation of a comprehensive, district-wide *IAQ TfS* Program. *“Before 2002... we were taking some action to address IAQ, but our activities were not systematic and they were not undertaken in a spirit of collaboration. Our crisis caused a paradigm shift in our approach... Now, we’re much more focused on involvement, communications, and collaboration with the community, the unions, and all the disciplines throughout the district. Before, we worked behind the scenes... in a veiled way... but now, everyone in the district understands IAQ and knows they have a role to play in promoting healthy school environments.”* – Jeff Moquin, Director of Risk Management

Organize for Success —

Build on What Works: When the district was hit with a crisis, they looked for an organization that was viewed as effective and trustworthy to carry their IAQ plans forward. In 2002, they engaged the existing Facilities Task Force, comprised of union members, teachers, parents, school board members, and others.

Secure Senior Level Buy-In: Broward’s IAQ Subcommittee includes the district’s superintendent. The team does not run into institutional obstacles because when something needs to happen or someone needs to participate, he can make it happen.

Build an Effective Team: Broward engaged all possible stakeholders for the IAQ Subcommittee and recruited IAQ committees in each school to serve as trainers, survey administrators, and communications channels to the community.

Assess Your Environments Continuously — Survey Occupants & Keep an Ear to the Ground: To ensure that the District-level team gets thorough input from building occupants, Broward’s online survey is designed to be simple and comfortable for building occupants to use (e.g., no name required), and the robust, online survey assessment instrument automatically compiles survey findings and maps required response activities to create a complete picture of each facility.

ORGANIZE FOR SUCCESS: Create Your Own Champions

“Unions, PTAs, and other interest group organizations are your friends. A major component of our recent success has been the positive relationships we have garnered with the district’s unions and alliance groups. It is important to develop a true partnership with these groups when investigating IAQ issues and developing your overall IAQ plans and goals.”

– Jeff Moquin,
Director of Risk Management

PROGRAM RESULTS

Broward uses survey results to track IAQ concerns and responses over time, and monitors workers compensation claims.

- ▲ Implemented IAQ TfS in 129 schools and 1 administrative facility so far and continue to add at least 20 new schools each year
- ▲ Declining trends in IAQ complaints (over a 50% decrease seen from 2005 to 2007)
- ▲ Correlation between schools with IAQ programs and decrease in reported IAQ issues and workers compensation claims and average expense per claim
- ▲ Improved district relations with union and parents; prior adversaries are now part of the solution

Plan Your Short and Long-Term Activities — Prioritize Your Activities:

Broward’s system names IAQ work orders according to a priority ranking based on the seriousness of the IAQ concern and the nature of the required response (e.g., behavioral change versus equipment repair).

Communicate with Everyone, All the Time — Be Transparent & Inclusive:

Where once IAQ issues were addressed quietly, now the district broadcasts information about its facilities—problems and all—on its Web site, on its cable access television station, and through written action plans to remediate the issues identified on their walkthroughs, which are distributed to all stakeholders.

Act to Address Structural, Institutional, and Behavioral Issues —

Education Changes Culture & Behavior: By engaging the unions and parent groups, the IAQ Subcommittee changed the way the Facilities and Maintenance and Operations Departments did business. They helped staff become collaborative problem-solvers rather than secret keepers.

SAUGUS UNION SCHOOL DISTRICT

Where Effective IAQ Management is Standard Operations

IAQ Tools for Schools (IAQ TFS) was the key to ending a 1999 air quality crisis at Saugus Union School District (SUSD), when blood tests for a student revealed exposure to arsenic, formaldehyde, phenol, and mold toxins suspected of originating in a portable classroom. In response, that same year, the district began a health and safety program and incorporated IAQ into its environmental safety policy. In 2002, SUSD established the District Safety and Risk Management Department to manage the IAQ program. *IAQ TFS* enabled the school district to bring the public into the process, remediate air quality problems, and build public trust.

PROGRAM RESULTS

SUSD annually compiles an IAQ summary report, which tracks IAQ complaints, assessments, and remediation.

- ▲ Eliminated parent lawsuits, fostered trust, and opened communication
- ▲ Reduced asthma-related visits to school nurse; *"Within 1 year of IAQ TFS implementation, IAQ-related health complaints disappeared"*
- ▲ Decline in IAQ concerns
- ▲ Absenteeism remained stable (3.6 percent); even though student population has grown 19 percent in last six years

Organize for Success —

Designate & Empower a Leader: The director of safety and risk management serves as the conduit between site-based IAQ teams, the school board, and cabinet members by delivering regular IAQ program briefings, reporting results, and sharing news about IAQ activities. SUSD also appointed a teacher to be the district IAQ coordinator and serve as the liaison between decision-makers, site IAQ coordinators, school staff, and the community, ensuring open communication between key stakeholders.

Having district-level positions responsible for IAQ management ensures effective operation even with staff turnover.

Build an Effective Team: Each school's IAQ committee includes an elected health and safety/IAQ coordinator, the head custodian, the principal, teachers, and parents. Site-based teams perform walkthroughs, identify concerns, submit work orders, track response activities, and administer IAQ-related staff surveys; all documents and forms are in the IAQ File Box in each school office. *"Our organizational paradigm for IAQ management facilitates seamless identification of potential problems and implementation of solutions."* — Adina Neale, District IAQ Coordinator

Assess Your Environments Continuously — Establish Your Baseline: SUSD compiles an annual IAQ summary report, which includes information on general cleanliness, animals in the classroom, drain traps, excess moisture, thermal comfort, and ventilation. The data are compared to baseline results from previous assessments to identify ongoing problems, successes, and trends. The number of reported IAQ problems has declined steadily over the past 7 years.

PLAN YOUR SHORT and LONG-TERM ACTIVITIES:

Plan for the Future

Preventive measures cost more upfront but save money over time. "Go to the district level and say, 'In the long run, it will make your life easier.' I think about *IAQ TFS* like dental hygiene. Some people just avoid it, but they end up needing a root canal!...If you want your school smiling, you can't neglect IAQ."

— Adina Neale,
District IAQ Coordinator

Plan Your Short and Long-Term Activities — Prioritize Your Actions:

SUSD prioritizes IAQ repairs based on their potential health impact; those presenting the most imminent danger take priority. For example, a gas leak results in immediate evacuation, while an improperly functioning HVAC unit requires less urgent action.

Communicate with Everyone, All the Time — Be Transparent &

Inclusive: SUSD values open communication. All of the IAQ management program's records are open to the public. Parents are apprised of IAQ projects and results through newsletters and the SUSD website, and they are encouraged to join IAQ Committees. Staff is kept abreast of health and safety/IAQ issues at weekly meetings.

Act to Address Structural, Institutional, and Behavioral Issues — Education Changes Culture & Behavior: Each site elects an IAQ coordinator who is trained in *IAQ TFS* and then trains the site's IAQ committee. *"We have standardized training presentations which has helped to ensure that we provide uniform, actionable, and easy to understand information."* Adina Neale, District IAQ Coordinator

VISALIA UNIFIED SCHOOL DISTRICT

Weaving IAQ Management into the Fabric of District Operations

Located in the heart of the San Joaquin Valley, this agricultural community has one of the highest rates of childhood asthma in the United States. As the community grew increasingly aware of the effects poor indoor air quality can have on health, Visalia Unified School District (VUSD) officials turned to the *IAQ TFS* Program in 2000. At first, VUSD began *IAQ TFS* quietly, but a change in administration encouraged the district to “do it loudly” so everyone could be a part of the program and know what VUSD was doing to address IAQ. Through *IAQ TFS* training and adoption of district IAQ policies, VUSD incorporated IAQ best practices into every aspect of its operation.

Organize for Success — Secure Senior Level Buy-in: VUSD gained strong support from the board and superintendent by providing concrete examples of how comprehensive and proactive IAQ management prevents bigger problems. For example, annual surveys of IAQ issues related to portable buildings resulted in preventive policies, such as putting portable buildings on cement or asphalt pads to prevent moisture intrusion.

Making sure senior-leaders understood the importance of IAQ allowed Visalia to make the investments required to launch and sustain an effective program.

Assess Your Environments Continuously — Use Technology to Make it Easier: VUSD uses an electronic work order system to submit facility assessment checklists. Staff may submit IAQ concerns by checking a box to indicate IAQ issues, which get top priority and most are investigated within 24 hours. Operations staff investigate the concern and may add comments and pictures to the online request.

Build on What Works: VUSD utilized existing school organizations to integrate IAQ components. Elementary school principals, for example, already kept track of safety, so they treated IAQ as another component of safety.

Plan Your Short and Long-Term Activities — Put It in Writing: The school board adopted specific goals to encourage the facilities, planning, and management departments to coordinate activities to weave IAQ management into the fabric of the district’s operations. School board regulations require the superintendent to implement an IAQ program and to follow specific guidance on air quality, integrated pest management, lead exposure reduction, and asbestos management. VUSD has integrated *IAQ TFS* in concert with other facilities assessment programs such as the Coalition for High Performance Schools Program and considers IAQ in all purchasing decisions.

PLAN YOUR SHORT and LONG-TERM ACTIVITIES: Plan for the Future

VUSD’s purchasing department is integrated in the IAQ management program so that when a site submits a purchase order, the department contacts maintenance to assess the location for the new equipment and how it will affect overall IAQ. “*IAQ Tools for Schools* is a fundamental element in our purchasing planning for all areas of district activity, from carpets to classroom furniture to classroom supplies.”

— Dr. Susan Cox,
Director of Risk Management

PROGRAM RESULTS

VUSD tracks the number and type of IAQ concerns reported on its Intranet and through IAQ TFS annual surveys.

- ▲ Increased awareness of asthma triggers and ability to control them
- ▲ Reduction in work orders
- ▲ Fewer significant IAQ concerns
- ▲ Carry-over of IAQ management into proactive approaches to other environmental health decisions, such as green purchasing policies

Communicate with Everyone, All the Time — Make it Meaningful to Your Audience: VUSD tailors IAQ communications to the target audience’s interests and concerns. For example, VUSD partnered with local asthma coalitions to communicate with teachers about the link between fragrance, cleaning products, and asthma in their students.

Act to Address Structural, Institutional, and Behavioral Issues — Education Changes Culture & Behavior: The district works with local architects and designers, as well as state construction and education offices, to help incorporate IAQ considerations into designs. VUSD communicates with its stakeholders and provides annual IAQ training for new site coordinators, and maintenance and custodial staff. As a result of pervasive education, VUSD views the *IAQ TFS* model as a ‘best practice’ and applies the lessons learned to numerous issues; most recently, they applied their IAQ response, action, and communication protocol to an infectious disease outbreak.



www.epa.gov/iaq/schools